

REMARKS

I. INTRODUCTION

Claims 1, 3, 4, 7, 9, 12 and 14 have been amended. No new matter has been added. Thus, claims 1-15 remain pending in the present application. In view of the above amendments and following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

II. THE CLAIM OBJECTION SHOULD BE WITHDRAWN

Claim 15 is objected to for an incorrect status identifier, which has now been corrected. (See 09/14/06 Office Action, p. 2, lines 13-15). Accordingly, Applicant respectfully submits that this objection should be withdrawn.

III. THE 35 U.S.C. § 103(a) REJECTIONS SHOULD BE WITHDRAWN

Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,628,891 to Vantalon et al. (hereinafter “Vantalon”) in view of U.S. Patent Publication No. 2003/0103532 to Bertram et al. (hereinafter “Bertram”) and U.S. Patent Publication No. 2002/0101991 to Bacon et al. (hereinafter “Bacon”). (See 09/14/06 Office Action, p. 3, lines 1-3).

Currently amended claim 1 recites, a “system for sending out-of-band (OOB) service information from a service provider, the system comprising a point of deployment (POD) module which receives an in-band (IB) transport stream (TS) including IB TS packets, the POD module including a processor for processing OOB service information from a service provider, constructing OOB TS packets using the OOB service information, *identifying unoccupied gaps*

in the IB TS, inserting the OOB TS packets in the unoccupied gaps and sending the OOB TS packets and IB TS packets to a set-top box using a transport stream channel; and wherein the set-top box includes a processor for processing the OOB TS packets.” (Emphasis added).

In contrast, Vantalon relates to a method and apparatus capable of handling several different digital signal transmission protocols in an automatic and flexible manner. (See Vantalon, Abstract). Specifically, Vantalon recites a set-top box and Conditional Access Module (CAM). (See Id., col. 6, lines 8-11; and fig. 4). The set top box includes in-band (IB) and out-of-band (OOB) receivers that receive signals from a communications network. (See Id., col. 6, lines 13-21). The outputs of the receivers are coupled to a transport stream co-processor in the CAM. (See Id., col. 6, lines 22-23). The CAM supplies digital video and digital audio to a decoder in the set top box via a transport stream and communicates out-of-band information to a microprocessor in the set top box via an extended channel. (See Id., col. 6, lines 33-65).

The Examiner correctly identifies the fact that Vantalon fails to disclose a system or method where the CAM sends the OOB data as packets, inserting the OOB TS packets in existing gaps. (See 09/14/06 Office Action, p. 3, lines 16-19). In order to overcome the deficiencies of Vantalon, the Examiner relies on Bertram for teaching the insertion of the OOB TS packets in existing gaps. (See Id., p. 3, line 20 – p. 4, line 16). However, Bertram relates to a method and system for *replacing NULL packets* of a content data transport stream with asset data packets. (See Bertram, p. 2, ¶ [0020]).

It appears that the Examiner is equating the NULL packets of the Bertram disclosure to the unoccupied gaps of claim 1 of the present invention. (See 09/14/06 Office Action, p. 6, line 21 – p. 7, line 2). However, the unoccupied gaps are separate and distinct from the NULL packets of Bertram as the NULL packets fail to perform the same, or analogous,

functions to the unoccupied gaps of the present invention. As noted by the Examiner, the NULL packets of Bertram are *inserted* into the content at a content development facility, and then the system *replaces* the NULL packets with OOB packets. (See Id., p. 7, lines 6-12). As disclosed by Bertram, the NULL transport packets are described as “*place holder[s]*” for the asset transport data. (See Bertram, p. 1, ¶ [0010]). Specifically, Bertram goes on to describe the NULL packets as *reserving a portion of the data stream* that is sufficient to accommodate the asset data packets. (See Id., p. 2, ¶ [0020]). In other words, the NULL packets reserve an amount of bandwidth (e.g., 300 kbps of a 3.6 Mbps bitstream). (See Id., p. 2, ¶ [0024]). Thus, any number of NULL packets of various sizes may be inserted into the content in order to *place-hold*, or occupy, a portion of the content. Regardless of the size or number of the NULL packets in the content, asset data packets *replace* the portion of the bandwidth that is reserved, or occupied, by some or all of the NULL packets. (See Id., p. 2, ¶¶ [0024] – [0025]). It is clear that any objects that intend to place-hold or reserve a portion within another content, such as the NULL packets of Bertram, is not equivalent to, nor analogous to, the *unoccupied gaps* of claim 1 of the present invention. The NULL packets of Bertram intend to perform the exact opposite function of the unoccupied gaps, in that the NULL packets *occupy space*. In addition, the fact that the NULL packets of Bertram are *replaced* by the asset data packet provides further indication that NULL packets are not equivalent to unoccupied gaps. The replacement of any object implicitly requires that object to originally occupy a space prior to being replaced. Accordingly, neither Bertram nor Vantalón, either alone or in combination, teach or suggest a “inserting the OOB TS packets in the unoccupied gaps” as recited in claim 1.

Currently amended claim 1 also recites, “*identifying unoccupied gaps in the IB TS.*” Since, as discussed in detail above, both Vantalón and Bertram fail to teach or suggest the

unoccupied gaps described in claim 1 of the present invention, Applicant respectfully submit that claim 1 is allowable over Bertram and Vantalon.

Furthermore, the Examiner relies on Bacon to cure additional deficiencies of both Vantalon and Bertram. (See 09/14/06 Office Action, p. 4, line 17 – p. 5, line 2). However, as detailed above, Vantalon and Bertram do not teach or suggest the limitations of “identifying unoccupied gaps in the IB TS” and “inserting the OOB TS packets in the unoccupied gaps” as recited in claim 1. Therefore, Applicant respectfully submits that Bacon is insufficient to cure the above-stated deficiencies of Vantalon and Bertram. Thus, Applicant respectfully submits that for at least the reasons stated above, claim 1 of the present application is not obvious over Vantalon in view of Bertram and Bacon, and request that the rejection of this claim be withdrawn. As claims 2 and 3, depend from, and therefore include all the limitations of claim 1, it is hereby submitted that claims 2 and 3 are also allowable.

The Examiner rejected claim 4 for the same reasons as the rejection of claim 1 over Vantalon in view of Bertram and Bacon. (See *Id.*, p. 5, lines 13-14). Claim 4 recites, *inter alia*, “...*identifying unoccupied gaps* in the IB TS; inserting at least one of the OOB TS packets *into the unoccupied gap*.” (Emphasis added). Therefore, Applicant respectfully submits that claim 4 is allowable for at least the reasons discussed above with regard to claim 1. As claims 5, 6 and 15 depend from, and therefore include all the limitations of claim 4, it is hereby submitted that claims 5, 6 and 15 are also allowable.

The Examiner rejected claim 7 for the same reasons as the rejection of claim 1 over Vantalon in view of Bertram and Bacon. (See *Id.*, p. 5, lines 15-16). Claim 7 recites, *inter alia*, “...*identifying unoccupied gaps* in the IB TS, inserting the OOB TS packets *in the unoccupied gaps*.” (Emphasis added). Therefore, Applicant respectfully submits that claim 7 is

allowable for at least the reasons discussed above with regard to claim 1. As claims 8-11 depend from, and therefore include all the limitations of claim 7, it is hereby submitted that claims 8-11 are also allowable.

The Examiner rejected claim 12 for the same reasons as the rejection of claim 1 over Vantalon in view of Bertram and Bacon. (See Id., p. 6, lines 5-7). Claim 12 recites, *inter alia*, "...the OOB service information is received from OOB transport stream (TS) packets sent by a data module *in unoccupied gaps inan in-band TS*." (Emphasis added). Therefore, Applicant respectfully submits that claim 12 is allowable for at least the reasons discussed above with regard to claim 1. As claims 13 and 14 depend from, and therefore include all the limitations of claim 12, it is hereby submitted that claims 13 and 14 are also allowable.

CONCLUSION

In light of the foregoing, Applicant respectfully submits that all of the now pending claims are in condition for allowance. All issues raised by the Examiner having been addressed. An early and favorable action on the merits is earnestly solicited.

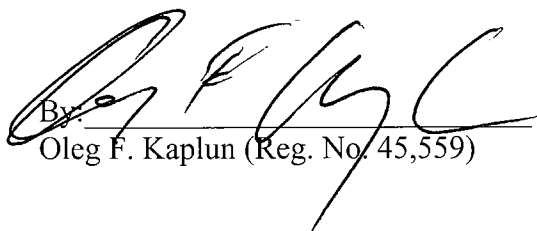
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Dated: December 14, 2006

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